

Claims

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A fan shroud having an integrated aspirator for use in conjunction with a pre-cleaner, the pre-cleaner having an air intake, an aspirator port, and an air exhaust, and wherein a first end of the shroud is adapted for disposal proximal to a cooling module while a second end is adapted for disposal proximal to a fan, the fan shroud comprising:
 - an aspirator portal in an upper surface of the shroud;
 - an aspirator having an air intake and an air outlet, the aspirator being supported inside the shroud proximal to the fan with the air outlet facing the fan; and,
 - a first end of an aspirator hose connected to the aspirator port of the pre-cleaner and passing through the aspirator portal and a second end of the aspirator hose connected to the air intake of the aspirator so that the aspirator hose passes generally through a mid-section of the shroud;
 - whereby the vacuum necessary for proper aspiration of the pre-cleaner is accomplished by air movement, induced by the fan, between the air intake of the pre-cleaner and the aspirator via the aspirator port and the aspirator hose.
2. A fan shroud as described in claim 1 wherein the fan shroud is comprised of an upper section and a lower section.
3. A fan shroud as described in claim 2 wherein the upper section and the lower section mateably engage one another at mating flanges so as to form an air passage between a fan and a cooling module of the vehicle.
4. A fan shroud as described in claim 1 wherein the air intake of the aspirator is a nozzle adapted to be connected with the aspirator hose.

5. A fan shroud as described in claim 2 wherein the aspirator includes a mounting flange having at least one fastener slot.
6. A fan shroud as described in claim 5 wherein a support bracket is provided for supporting the lower section of the shroud to the vehicle structure.
7. A fan shroud as described in claim 6 wherein one or more fasteners secure the aspirator to the lower section of the shroud and the bracket by way of at least one aperture and the at least one fastener slot.
8. A fan shroud as described in claim 2 wherein at least one pre-cleaner mounting boss is provided on the upper section of the shroud.
9. A fan shroud as described in claim 8 wherein the at least one mounting boss corresponds to at least one mounting tab provided on the pre-cleaner housing.
10. A fan shroud as described in claim 9 wherein when the at least one mounting tab is aligned with the at least one mounting boss the aspirator port of the pre-cleaner is positioned such that it is disposed in proximity to the aspirator portal in the upper section of shroud.
11. A fan shroud as described in claim 1 wherein the fan shroud is formed of a thermoplastic or thermoset material in a conventional molding process.